

BLAHA, K.

Mechanization of cleaning cattle. p. 23. SMORNIK. RADA MECHANISACE
A ELEKTROIFIKACE ZEMEDELSTAVI A LESNICTVI. Praha. Vol. 28, No. 1,
Apr. 1955.

SOURCE: East European Accessions List (EEAL) Library of Congress
Vol. 5, No. 7, July 1956.

COUNTRY : Czechoslovakia H-33
CATEGORY :

ABS. JOUR. : RZKhim., No. 20 1959, No. 73493

AUTHOR : Blaha, K.; Sulc, J.

INST. :

TITLE : Statistical Control Method in Paper
Manufacture

ORIG. PUB. : Papir a celul., 1959, 14, No 2, 30-34

ABSTRACT : A statistical regulation method has made it possible to maintain within predetermined limits the length of sheets of paper cut by an automatic cutter, and eliminate production of sheets that are off-size in length. It was found that one of the knives was functioning with a lower degree of precision and caused greater deviations from the standard length, than the other knife. As a result of the use of statistical control method, savings in paper and cost have been attained.

CARD: 1/1

121

ELAHA, K.

Statistical acceptance in paper making. p. 255.

PAPIR A CELULOZA.(Ministerstvo lesu a drevarskeho prumyslu) Praha,
Czechoslovakia, Vol. 14, no. 11, Nov. 1959.

Monthly List of East European Accessions (KEAI) LC, Vol. 9, no. 1,
Jan. 1960

Uncl.

BLAHA, KAREL

Czech

CA: 47:11133

with RUDOLF LUKES

Tech. Univ., Prague, Czech

"The action of Grignard reagents on the amide group. XVII. A new method for the preparation of higher dicarboxylic acids."

Chem. Listy 46, 726-31 (1952); cf. CA 45, 10245f

BLAHA, K.; LUKES, R.

"Preparation of Grignard Reagents from W,W'-dibrom-n-alkanes." p. 450
(COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNIK CZECHOSLOVATSKIKH
KHEMICHESKIKH RABOT. Vol 18, no. 4, Aug. 1953; Praha, Czech.)

So: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 4,
April 1955, Uncl..

BLAHA, Karel

③ Kern
The action of Grignard reagents on the amide group.
XVII. A new method for the preparation of higher dicar-
boxylic acids. Rudolf Lukel and Karel Blaha (Tech. Univ.,
Prague, Czech.). Collection Czech. Chem. Commun. 18,
804-17(1963).—See C.A. 47, 11133f.
B. H.

Chemical Abst.

Vol. 48

Aug. 1954

Synthesis of alcohols under physiological conditions
Jan. 1954 and 1955
Czech

BLAHA, K.; FERLES, M.

"Alkaloids with the Pyrrolizidine Ring System", P. 284, (CHEMICKÉ LISTY,
Vol. 48, No. 2, Feb. 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12,
Dec. 1954, Uncl.

BLAHA, KAREL

CZECH

Hydrogenation of hydroxybenzoic acids. Radol 1, 1974, Jan (Tribuna, nr 1, Karel Blaha, Vysoká škola chemická, Praha), 42, 207-40, 717-22, 1951.
Hydrogenolysis of OH groups in the benzoic hydroxybenzoic acids during catalytic hydrogenation was studied systematically. Hydrogenation was carried out in an autoclave using PtO₂ as a catalyst at 21-5° and 735-741 mm. The degree of hydrogenolysis was found from the consumption of H₂ and by titration of the steam-volatile and nonvolatile acids with NaOH. Identification of the products was carried out by descending paper chromatography of the results in BuOH satd. with 1.5N NH₄OH, using bromocresol green as detection agent. The hydrogenolysis increased from o- to p-position: o-OH 20.8%, m-OH 61.5%, p-OH 84.5%. The three hydroxybenzoic acids gave, in addition to the stereoisomeric cyclohexanecarboxylic acids, cyclohexanecarboxylic acid (I). 2,3-(HO)C₆H₃CO₂H (II) gave cis- (III) and trans-2-cyclohexanecarboxylic acid (IIIa), cis- (IV) and trans-3-cyclohexanecarboxylic acid (IVa), and I. Both o-HOCH₂CO₂H (V) and II produced CO₂ during hydrogenation. As reference samples, the following acids were prepd.: III, m. 75-7°, IIIa, m. 101.5-111°; IV, m. 131.5-132.5°, IVa, 118-119° (lit. 183-187°); cis- (V) and trans-3-cyclohexanecarboxylic acid (VIa), m. 140-141° and 147-7.5°, resp. R_f values and m.p. of the polymers are listed: V, 0.45, —; o-HOCH₂CO₂H, 0.18, —; p-HOCH₂CO₂H, 0.04, —; II, 0.23, —; I, 0.45, 88-9°; III, 0.39, 134-135°; IIIa, 0.26, 128.5-9°; IV, 0.19, 138-6.5°; IVa, 0.76, 120-1°; VI, 0.12, 120-1°; VIa, 0.19, 138.5-9°. According to the speed of paper chromatography, conformations with axial OH groups have been assigned to III, IVa, and VI.
M. Hudlický

"APPROVED FOR RELEASE: 06/08/2000

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APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000205420019-8"

BLAHA K

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and
Their Applications. Cautchuk Natural and Synthetic.
Rubber.

K-3

Abs Jour: Ref. Zhur-Khimiya, No 1, 1958, 3201.

Author : M. Felix, K. Blaha.

Inst :

Title : On the Use of Statistical Methods in Rubber Compounding.

Orig Pub: Chem. prumysl, 1956, 6, vyp. 7, 291-292

Abstract: Meissner and Schaetz's article (see preceding abstract)
does not pay sufficient attention to experimental errors.

Card : 1/1

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CIA-RDP86-00513R000205420019-8"

CHECHO-SLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19193.

By the Grignard reaction, from C_6H_5MgBr (0.656 mole C_6H_5MgBr , 0.695 mole Mg) and ethyl ester of cyanoacetic acid (0.266 mole) in 650 cc absolute ether (10 hours, 20°) is obtained ethyl ester of β -aminocinnamic acid (V), yield 63%, b.p. $164-165^\circ/10$ mm, 20° 0.16 mm. From V (5g.) by boiling it with alcohol (70cc), saturated HCl (gas), and water (2.5 cc) in the course of 60 min. ethyl ester IV, yield 57%, is obtained b.p. $156^\circ/14$ mm, the hydrolysis of which according to Kloze (see Rzhikhim, 1955, 9522) produced IV, yield 77%, m.p. 99° . Solution I (1 mole) and IV (1.25-2.0 mole) in a buffer mixture with a pH 3.3-6.6 is left standing at $20-25^\circ$ for 3-502 hours, acidified, extracted with ether III, evaporated and $CHCl_3$ III, which is isolated in the form of a picrate, m.p. $154-155^\circ$ (from water) is extracted. The optimal conditions of the con-

Card : 2/3

CHECOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19193.

densation; proportion I:IV = 1 mole: 1.6 mole, pH 4.7-4.9
(buffer solution cytrate-HCl-NaOH), time 190 hours, yield
III 46%.

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"APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000205420019-8

Dieta Kakei

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CIA-RDP86-00513R000205420019-8"

BLAHA, K.

The meaning of conformation in organic chemistry.

p. 223. (Chemie, Vol. 9, no. 2, Apr. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

CZECHOSLOVAKIA / Organic Chemistry. Natural Substances and Their Synthetic Analogues. G

Abs Jour : Ref. Zhur. - Khimiya, No. 15, 1958, No. 50499

Author : Lukes, R; Blaha, K.; Kovar, J.

Inst : -

Title : Structure of Nitrogen-containing Substances.
III. Structure of Sedamine.

Orig Pub : Chem. Listy, 1957, 51, #5, 927-936 (Czech);
Collect czechosl. chem. commun., 1958, 23,
#2, 306-316 (Ger).

Abstract : Stereoisomers of 2-(β -phenyl- β -oxyethyl)-
piperididine-nor-sedamine (I) and nor-allo-
sedamine (II) form stereoisomeric 3,4-tetra-
methyleno-6-phenyl-tetrahydro-1,3-oxazine (III)
and allo-3,4-tetramethylene-6-phenyl-tetrahydro-

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CZECHOSLOVAKIA / Organic Chemistry. Natural Substances G
and Their Synethetic Analogues.

Abs Jour : Ref. Zhur. - Khimiya, No. 15, 1958, No. 50499

1,3-oxazine (IV), upon reaction with HCOOH . In a similar manner I and $\text{n-NO}_2 \cdot \text{C}_6\text{H}_4 \cdot \text{CHO}$ (V) gave $\sim 80\%$ 2-n-nitrophenyl-3,4-tetramethylene-6-phenyltetrahydro-1,3-Oxazine (VI). At the same conditions II and V gave only $\sim 20\%$ of stereoisomeric allo-2-n-nitrophenyl-3,4-tetramethylene-6-phenyltetrahydro-1,3-oxazine (VII). Mixture of I and II (1:1) with a mole of V yielded only VI. Compound VII may be hydrolized 60 times faster than VI. Only I led to the corresponding tetrahydrooxazine derivative, with piperonal (VIII), while II didn't react with VIII at all. Compounds derived from I were therefore most stable. Based on structure analysis, I had an erithro, and II threo structure. Therefore,

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CZECHOSLOVAKIA / Organic Chemistry. Natural Substances and Their Synthetic Analogues. G

Abs Jour : Ref. Zhur. - Khimiya, No. 15, 1958, No. 50499

IX and X. Reduction of XI (after Methylation of I and II with a general yield of 42%) with LiAlH_4 yielded a mixture of IX and X (1:5.5) I m.p. 98-99° (from benzene petr. ether); (I) hydrochloride m.p. 158-159. (from acetone CH_3OH) M.P. of: II-112-113° (fr. benzene-petr.-ether), II chloride 153-154° (fr. acetone). From I, 37% aq. HCOH and 95% HCOOH (12 hours, 110°) IX could be prepared, 75% yield, m.p. 89-90° (from petr.-ether). By analogy II yielded X, 82% yield, m.p. 67-68°. 0.3 g II in 4 ml glacial CH_3COOH , 85 mg CrO_3 in 3 ml CH_3COOH and 0.5 ml H_2O (50-60°, ~50 min) gave XI, 34% yield. Melting points of XI and derivatives

Card 4/7

CZECHOSLOVAKIA / Organic Chemistry. Natural Substances and Their Synthetic Analogues. G

Abs Jour : Ref. Zhur. - Khimiya, No. 15, 1958, No. 50499

9 were; XI, B.P. 165°/8mm; picrate, 161-162°, bromide 182-182.5° (from acetone-CH₃OH). From 0.5 g I and 0.375 g V in C₆H₆ (3 hours of azeotropic distillation of water) VI was prepared (85% yield). M.P. of VI and derivatives; VI 118-119° (fr. ether-pet. ether), VI-picrate 208-209°, VI-chlorohydrate 212-213° (from acetone-CH₃OH). From a mixture of 250 mg I and 250 mg II with 190 mg V were obtained 250 mg VI and 180 mg of regenerated II. 200 mg VI in -0.5 n HCl (48 hours, 200) yielded 165 mg VI. At 100° VI was hydrolyzed to I and V in 1 hour. As described earlier II and V (upon chromatography) gave VII, 12.1% yield, m.p. of derivatives: VII -

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CZECHOSLOVAKIA / Organic Chemistry. Natural Substances and Their Synthetic Analogues. 4

Abs Jour : Ref. Zhur. - Khimiya, No. 15, 1958, No. 50499

125-126° (fr. benzene pet. ether); picrate - 177.5-178.5°. Boiling II and V in chlorobenzene for 6 hours, led to the formation of 42.5% VII, which can be hydrolyzed in 3 hours to II and V (90%) by 0.5 n HCl, at ~20°. From 0.25 g I and 0.15 g VIII, in boiling chlorobenzene, 2-(3,4-methylene-dioxyphenyl)-3,4-tetramethylene-6-phenyltetrahydro-1,3-Oxazine, 0.205 g yield, m.p. 117-118° (fr. pet. ether); picrate m.p. 209° (fr. acetone - CH₃OH) was prepared. In benzene this reaction could not be achieved. II didn't react with VIII, even in chlorobenzene. upon reaction of I with an aq. solution of HCOH in presence of EtCO₃ (10 hours, ~20°) III was formed, 90% yield, B.P. 175°/12 mm or 165°/8mm,

Card 6/7

CZECHOSLOVAKIA / Organic Chemistry. Natural Substances and Their Synthetic Analogues. G

Abs Jour : Ref. Zhur. - Khimiya, No. 15, 1958, No. 50499

m.p. 39-40°, chlorohydrate's m.p. 184-186° (fr. acetone), picrate's m.p. 140°, chlorohydrate's m.p. 184-186° (fr. acetone), picrate's m.p. 140° (from alc). III could not be hydrolyzed appreciably upon boiling with an aqueous-alcoholic sol. of HCl. Upon reduction of III by LiAlH_4 in ether (1.5 hour boiling) IX was formed, 87% yield. A similar reaction of 0.5 g II and CH_2O yielded 46 mg of IV, b.p. 160-165°/8 mm, picrates m.p. 155° (from water). Upon slow distillation of 130 mg IV with 10 ml alcohol and 1 ml in HCL, 95 mg II were prepared. CH_2O was also formed. Upon reduction of IV by LiAlH_4 in ether X was obtained with a 66% yield. Article II, see R. Z. Khim, 1957, 51108. -- J. Plesak.

Card 7/7

CZECHOSLOVAKIA / Organic Chemistry. General and
Theoretical Topics of Organic Chemistry.

G

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60814.

Abstract: The lengthening of the racemate chain or of the optically active α -aminophenylacetic acid according to Arndt-Eistert reaction did not succeed, because chlorides of corresponding N-formyl- or N-tosylsubstituted acids did not produce diazoketones. 3.2 g of α -phthalimidophenylacetic acid (I) chloride, melting point 143 to 144° (from benzene) is obtained of 4 g of I and 10 ml of SOCl_2 (1 hour boiling), that acid chloride, interacting with ether solution of CH_2N_2 , produces α -phthalimidophenylacetyl-diazomethane (II), yield 88%, melting point 135.5 to 136.5° (from CH_3OH). Only resin-like products are obtained by boiling II with Ag_2O

Card 2/11

CZECHOSLOVAKIA / Organic Chemistry. General and
Theoretical Topics of Organic Chemistry.

G

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60814.

Abstract: at below 0° and 2.5 hours of aging at 20°) the mass is cooled again, 1.75 g of IV in 5 ml of C₅H₅N is added, and after aging (3 hours at 0° and 20° hours at 20°), 2.5 g of a mixture of V and 2-tosylamino-2-phenyl-1-tosyloxyethane (VI) was obtained; the melting point of the mixture is 95 to 97° (from aqueous alcohol). The solution of 2 g of V + VI in 10 ml of dioxane is heated 20 min. with the solution of KCN in 10 ml of ethyleneglycol, and 1.36 g of β-tosylamino-β-phenylpropionitril (VII) is obtained, melting point 145 to 145.5°. At the heating (90 min. at 55 to 57°) of III solution in mixed dioxane and alcohol (2 : 1) with 10%-ual H₂O₂, β-tosylamino-β-phenylpropionamide (VIII) is produced, yield 82%, melting point 214 to 215°

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CZECHOSLOVAKIA / Organic Chemistry. General and
Theoretical Topics of Organic Chemistry.

G

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60814.

Abstract: is converted into D-(-)- β -tosylamino- β -phenyl-propionitril [D-(-)-XII], yield 17%, melting point 143 to 144°, $[\alpha]_{18}^{20} = -31.6^\circ$ (c = 1.17, alcohol). Similarly to VIII, D-(-)- β -tosylamino- β -phenyl-propionamide [D-(-)-XIII] is obtained from XII, yield 62%, melting point 238 to 240° (from acetone-alcohol, 5 : 1), $[\alpha]_{18}^{20} = -62.3^\circ$ (c = 1.47, C₅H₅N). Similarly to XII, L-(+)-XII, melting point 143 to 145° (from benzene), $[\alpha]_{20}^{20} = +29.9^\circ$ (c = 1.77, alcohol), is synthesized of impure XI via a mixture of tosyl derivatives with a yield of 27%; L-(+)-XIII (XIV) is obtained from L-(+)-XII similarly to VIII, yield 49%, melting point 239 to 241° (from acetone), $[\alpha]_{20}^{20} = +67.4^\circ$ (c = 1.81, C₅H₅N). Ethyl ester of β -amino- β -

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11

CZECHOSLOVAKIA / Organic Chemistry. General and
Theoretical Topics of Organic Chemistry.

G

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60814.

Abstract: and others, Ber., 1910, 43, 2020), D-(-)- β -formyl-
amino- β -phenylpropionic acid is produced, melting
point 134 to 135° (from water), $[\alpha]^{22}_D = -118.2^\circ$
(c = 1.2, alcohol), it is converted with HCl in
alcohol into D-(-)-XV (XVII), yield 71%, boiling
point 107°/1.8 mm, $[\alpha]^{18}_D = -13.2^\circ$, $n^{20}_D = 1.5130$,
 $d^{18}_4 = 1.0659$. Ethyl ester of β -tosylamino- β -
phenylpropionic acid (XVIII) is prepared of XV
and IV by heating 1 hour in C_5H_5N in a water bath,
yield 53%, melting point 79° (from benzene -
petroleum ether). After having been heated 15
hours with 8 n. NH_3 in alcohol in a sealed tube,
XVIII produces VIII (95%). Similarly to XVIII,
D-(-)-XVIII (XIX) is produced of XVII and IV; XIX

Card 8/11

CZECHOSLOVAKIA / Organic Chemistry. General and
Theoretical Topics of Organic Chemistry.

G

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60814.

Abstract: melting point 240° (from alcohol) is produced by heating 0.87 g of XX with 60 ml of 11 n. NH_3 in alcohol for 32 hours to 50° in an autoclave. Similarly, D-(+)- β -benzylamino- β -phenylpropionamide (XXII), melting point 260° (from alcohol), $[\alpha]_D^{21} = +26^{\circ}$ ($c = 0.17$, alcohol) is produced of XXI. XXII does not show any optical activity in $\text{C}_5\text{H}_5\text{N}$. β -benzoylamino- β -phenylpropionic acid, melting point 195° , is produced by saponifying XX with aqueous-alcohol NaOH. XXII with KBrO solution (10 min. of heating to 80°) produces D-(-)-4-phenylimideazolidone-2 (XXIII), yield 31%, melting point 200° (from water), $[\alpha]_D^{23} = -35^{\circ}$ ($c = 0.4$, water). 1-Phenyl-1-benzoylaminoethyl-

Card 10/11

121 lab, K

Distr: 4E20(1)

Absolute configuration of β -hydroxy- α -phenylpropionic acid/ R. Lukes, K. Blaha, and J. Kovar (Czechoslovak Acad. Sci., Prague). *Chem. & Ind. (London)* 1958, 627-8.

From α -PhCH(OH)CH₂CO₂R (I) (R = OH) (II), obtained from the racemate by resolution with brucine, was prepd. I (R = OEt) and from this I (R = NH₂) (III), m. 105°, $[\alpha]_D^{25}$ 26°. III kept 0.5 hr. with NaOBr soln. (ice cooling) followed by addn. of excess NaOH and stirring 1 hr. at 40° gave PhCH(OH)CH₂NH₂ (IV); hydrochloride (V), m. 208° (Et₂O-EtOH). $[\alpha]_D^{25}$ 35° (c 2.0, H₂O). V also was prepd. by reduction of L(+)-mandelamide; thus II belongs to the L-series.

Rip G. Rice

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CZECHOSLOVAKIA / Chemical Technology, Chemical Products and Their H-32
Application. Artificial and Synthetic Fibers.

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 17763

Author : Felix, M.; Blaha, K.

Inst : Not given

Title : Certain Reasons for Shagginess of Viscose Fiber
(Statistical Analysis)

Orig Pub : Chem. promysl, 1958, 8, No 3, 157-163

Abstract : A method of mathematical statistics was employed for
revealing actual causes that render viscose fiber shaggy.
It was found that the strongest effect on shagginess has
the presence of old viscose in a mixture, then aging
temperature, degree of aging and viscosity of viscose,
concentration, and, finally, drop in the concentration of
H₂SO₄ in the spinning operation. -- E. Natkhan

Card 1/1

Country : Czechoslovakia G-1
Category= : Organic Chemistry - Theoretical Organic
Chemistry.
Abs. Jour. : 19284
Author : Likes, R.; Kovar, J.; Kloubek, J.; Blaha, K.
Institut. :
Title : Configuration of Nitrogen-Containing Substances.
IV. Absolute Configuration of Optically Active
Beta-Amino-Beta-Phenyl-Propionic Acid.
Orig. Pub. : Collect. czechosl. chem. commun., 1958, 23,
No 7, 1367-1376
Abstract : See RZhKhim, 1958, 60814.

Card: 1/1

F-3 - G-1

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81559.

Author : Blaha K., Kovar J.

Inst :

Title : The Configuration of Nitrogen-Containing Compounds.
V. The Preparation of Derivatives of 2-Amino Cyclohexanols.

Orig Pub: Chem. listy, 1958, 52, No 1, 77-82.

Abstract: From the action of formaldehyde on the nitrogen derivative of cis- or trans-2-amino cyclohexanols are obtained the nitrogen derivatives of 4,5-tetramethylene oxazolidones, which are converted by the action of LiAlH_4 or $\text{C}_6\text{H}_5\text{MgBr}$ into N,N'-disubstituted cis- or trans-2-amino cyclohexanols, having the same configuration as the starting amino alcohols. Upon shaking 1.5 grams of trans-2-methylamino cyclohexanol (trans I) with 2 ml

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81559.

of 37% formaldehyde and 2 grams of potassium carbonate in 15 ml of alcohol (for 48 hours), trans-3-methyl-4,5-tetramethylene oxazolidine (trans II) is formed (yield 1.3 grams, b.p. 80-85°C./13 mm., n_D^{20} 1.4737, d_4^{20} 0.9965), the reduction of which with lithium aluminum hydride (0.3 gm) leads to trans-2-dimethylamino cyclohexanol (trans III) [yield 0.15 grams, b.p. 85-90°C./13 mm.; hydrochloride (HC), m.p. 183-184°C. (from alcohol-ether); hydrobromide (HB) m.p. 169°C. (from alcohol-ether)], identical to the compound that was obtained in a 60% yield from trans-2-chloro cyclohexanol (IV) and 30% $(CH_3)_2NH$. In the same way from HC cis-I and formaldehyde (5 days at -20°C.) was obtained cis-II (yield 63%, b.p. 67°C./

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81559.

13 mm., n_D^{20} 1.4730, d_4^{20} 0.9978), which was reduced with $LiAlH_4$ to cis-III [yield 0.136 grams (from 0.14 grams of cis-II), m.p. 43-46°C.; HC m.p. 179-180°C. (from acetone containing 4% methanol); picrate (PC) m.p. 165.5 - 166.5°C. (from water)], was identical with the sample obtained by boiling (30 hours) cis-2-aminocyclohexanol (cis-V) with 37% CH_3O and 95% $HCCOH$. In the same way from one gram of trans-2-benzylamino cyclohexanol (trans-VI) was synthesized trans-3-benzyl-4,5-tetramethylene oxazolidine (trans-VII) (yield 0.9 grams, b.p. 165-170°C./9 mm., which by the reduction with $LiAlH_4$ is converted into trans-2-methyl benzylamino cyclohexanol (trans VIII) [quantitative yield, b.p. 165-170°C./12 mm., 130°C./2 mm.,

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81559.

148-152°C./9 mm., it was reduced with LiAlH_4 to cis-VIII [b.p. 120°C./1.5 mm.; HC m.p. 175.5 - 177°C. (from acetone - alcohol - ether); PC (with one mole of water), m.p. 92-93°C. (from aqueous alcohol); PC m.p. 155.5 - 156.5°C. (after drying at 0.1 mm) which is formed also by the reaction between cis-II and $\text{C}_6\text{H}_5\text{MgBr}$ in ether. Cis-VII (0.7 grams) with $\text{C}_6\text{H}_5\text{MgBr}$ (boiled for 5 hours in ether) forms cis-IX, yield 0.8 grams, b.p. 181°C./1.5 mm, m.p. 50-51°C. (from petroleum ether); HC m.p. 203-204°C. (from alcohol - acetone). In contrast to the 2-alkyl-amino cyclohexanols, trans-V condensed with formaldehyde in alcohol in the presence of potassium carbonate (24 hours at $\sim 20^\circ\text{C}.$) with the formation of bis-(4,5-tetramethylene oxazolidyl-3)-methane, m.p.

Card : 5/7

CZECHOSLOVAKIA/Organic Chemistry: Synthetic Organic Chemistry.

G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81559.

148-150°C. (from petroleum ether), it is not reduced with LiAlH_4 and upon heating with aqueous - alcoholic HCl , formaldehyde is split off. From the nature of the reaction with $\text{C}_6\text{H}_5\text{MgBr}$, it is possible to distinguish the condensation products of aminoalcohols with aldehydes from the isomeric methylamino ketones. By the reaction of $\text{C}_6\text{H}_5\text{MgBr}$ on 1-methyl-2-phenazyl piperidine (or on its HB) in ether (12 hours boiling), 1-methyl-2-(β -oxy- β , β -diphenyl ethyl)-piperidine is formed, m.p. 118-119°C. (from petroleum ether), which by the oxidation with CrO_3 in acetic acid forms benzophenone. In contrast to this from the action of $\text{C}_6\text{H}_5\text{MgBr}$ on 3,4-tetramethylene-6-phenyl tetrahydroxazine (X), there is formed 1-benzyl-2-(β -oxy- β -phenylethyl)-pi-

Card : 6/7

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81559.

peridine (XI) (α -isomer), b.p. 165-167° C./1 mm.,
m.p. 62-63° C. (from petroleum ether). In the same
way the β -isomer of XI is formed by the action of
 C_6H_5MgBr on allo-X, b.p. 180° C./0.6 mm. Communication
IV, see R. Zh. Khim., 1958, 60814.

Card : 7/7

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81560.

Author : Kovar J., Blaha K.
Inst :
Title : The Configuration of Nitrogen-Containing Compounds.
VI. The Configuration of the Substituted 2-Amino
Cyclohexanols.

Orig Pub: Chem. listy, 1958, 52, No 2, 283-289.

Abstract: The splitting rate of substituted cis-4,5-tetra-
methylene oxazolidines (TMO) under the action of
2,4-dinitrophenyl hydrazine in water - alcoholic
 H_2SO_4 is about ten times less than the correspond-
ing trans compounds. This difference in the speed
of splitting can be used to establish the configura-

Card : 1/5

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81560.

tion of the cis- and the trans-aminocyclohexanols, and the N-substituted aminocyclohexanols, which by the condensation with p-NO₂C₆H₄CHO (I) formed TMO of the same configuration. The hydrogenation of o-acetamid phenol on Raney Co in alcohol (150-160°C., 100 atm.), leads to the cis-2-acetamido cyclohexanol (II), yield 20.3%, m.p. 143-144°C. (from acetone); the hydrochloride (HC) m.p. 186-186.5°C. Cis-2-aminocyclohexanol (cis-III) is obtained in a 89% yield from the HC of II by the conventional method, m.p. 73-75°C. The trans-N-benzoyl-2-methylamino cyclohexanol is permitted to react with SOCl₂ (2.5 hours at 60°C.), poured into ether, cooled off, the separated product is boiled with 10% HCl (5 hours), and cis-2-methylamino cyclohexanol (cis-IV) is obtained in the form of HC, m.p. 205-206°C.

Card : 2/5

11

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khkh., No 24, 1958, 81560.

(from alcohol - acetone); cis-IV, boiling point 100-110 C. (on a water bath/8mm.), m.p. 38-40°C.; the picrate (PC), m.p. 141-142°C. (from water). Upon shaking trans-2-chloro-cyclohexanol with an aqueous solution of CH_3NH_2 (24 hours), trans-IV is obtained, yield 66%, b.p. 113°C./21 mm., HC m.p. 121°C. (from acetone containing 10% methanol). The heating of four grams of trans-III with 3.2 grams of $\text{C}_6\text{H}_5\text{CH}_2\text{NH}_2$ in alcohol (8 hours at 145-155°C.) leads to the formation of trans-2-benzylamino cyclohexanol (trans-V), b.p. 125-127°C./0.6 mm., m.p. 73°C.; PC, m.p. 134-135°C (from 50% alcohol); HC, m.p. 204-205°C (from acetone containing 10% alcohol), which forms trans-N-benzoyl-2-benzyl-

Card : 3/5

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81560.

amino cyclohexanol with C_6H_5COCl in benzene in the presence of $NaOH$, [yield 77%, m.p. 116.5-117.5°C. (from benzene - petroleum ether)], which is converted upon boiling with $SOCl_2$ to cis-V, m.p. 67°C. (from petroleum ether); HC m.p. 248-250°C. (from alcohol - acetone), PC m.p. 157-158°C. (from water). Cis-V was also synthesized by the reduction of Schiff's base, which was obtained from cis-III and C_6H_5CHO in benzene with the help of lithium aluminum hydride, yield 74% (in the form of HC). Upon boiling equimolar amounts of aminocyclohexanols and I in C_6H_5Cl , with the simultaneous distillation of water azeotrope (7 hours), the corresponding TMO were obtained. Further are listed the starting aminocyclohexanol, the TMO obtained, yield in %, m.p. in °C. (from petroleum ether

Card : 4/5

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81560.

or benzene - petroleum ether). The constant of the splitting rate of TMO at 24°C.: cis-IV, cis-2-(4'-nitrophenyl)-3-methyl-4,5-tetramethylene oxazolidine (cis-VI), 82, 68-69, 8.12×10^{-7} ; trans-IV, trans-VI, 78, 77-78, 8.0×10^{-7} ; cis-V, cis-2-(4'-nitrophenyl)-3-benzyl-4,5-tetramethylene oxazolidine (cis-VII), 94, 59-61, 1.31×10^{-5} ; trans-V, trans-VII, 50, 97.5-99, 1×10^{-7} ; cis-III, cis-2-(4'-nitrophenyl)-4,5-tetramethylene oxazolidine (cis-VIII), 93, 73-73.5, 9.81×10^{-3} ; trans-III, trans-VIII, 65, 127, 4.7×10^{-2} . The IR spectra of all TMO are furnished.

Card : 5/5

BLAHA, K.

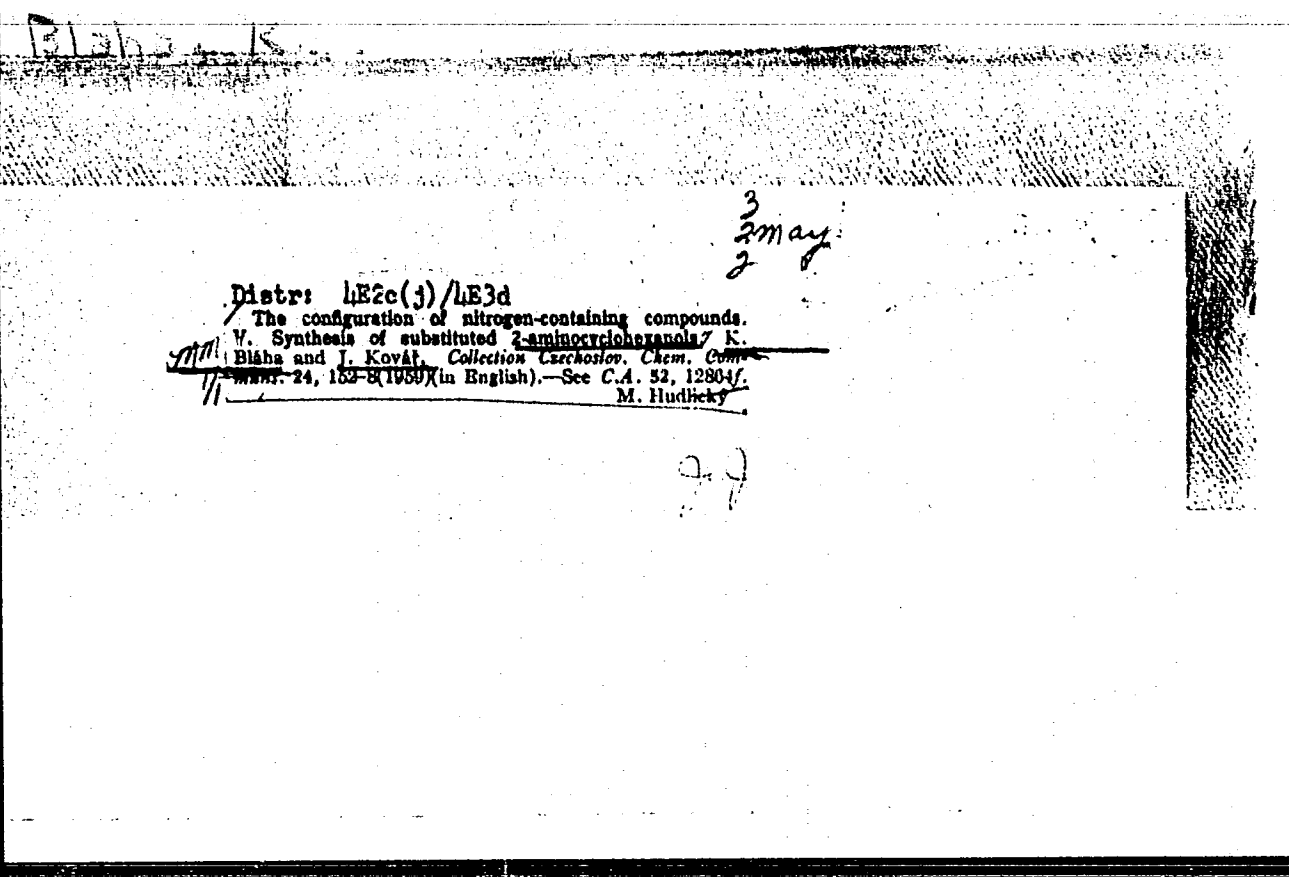
AUTHORS: Lukeš, E., Kloubek, J., Kovář, J. and Blaha, K.
TITLE: A Note on the Hoes Synthesis of Hygrine (X Masova
 synthesis hygrin)
PERIODICAL: Chemické listy, 1958, Vol 52, Nr 11, pp 2081 - 2089
 (Czechoslovakia)
ABSTRACT: The authors state that they are able to show that the
 Hoes (Ref 1) synthesis of hygrine (1) actually does not
 yield a product identical to the natural alkaloid but to
 the isomer, tetrahydrocannabinol (2). The reaction of
 the isomer, tetrahydrocannabinol (2) with aldehyde with amino
 alcohol in the presence of hydrochloric acid at raised
 temperatures and pressure has been re-examined with the
 use of a number of examples and negative results have
 been obtained. In fact, Hoes himself informed the editors
 of Beilstein's Handbook that the products of the
 majority of the alkaline oxidation reactions gave perhas
 oxazolidones or tetrahydro-oxazines (Ref 10 - First
 Supplement, Vol 21, 4th edition, p 262, Springer, Berlin,
 1955). The authors give extensive practical details not
 only of the reaction of formaldehyde with a and b
 isomers of 2-(β phenyl- β hydroxyethyl) piperidine but of

Card 1/2

the reactions of Hoes' "Hygrine". They conclude that there
 is no evidence for the "Hoes reaction" and that the first
 actual synthesis of Hygrine is that of P. Born
 (Chem. Ber., 1904, 37, 1884). On the other hand, the
 German Chem. Abstr., 1904, 32, 249). There are 26 references,
 13 German and 7 English.

ASSOCIATION: Laborator heterocyklických sloučenin, Československá
 akademie věd, Praha
SUBMITTED: Československá akademie věd, Praha
 March 24, 1958

Card 2/2



COUNTRY : CZECHOSLOVAKIA G
CATEGORY : Organic Chemistry. General and Theoretical
Problems of Organic Chemistry
ABS. JOUR. : RZKhim., No.23 1959, No. 82170
AUTHOR : Kovar, J.; Blaha, K.
INST. : -
TITLE : The Configuration of Nitrogen-Containing
Compounds. VI. The Configuration of Substi-
tuted 2-aminocyclohexanols
ORIG. PUB. : Collect. Czechosl. Chem. Commun., 1959, 24,
No 3, 797-803
ABSTRACT : No abstract.
See RZKhim., 1958, No 24, No 81560

CARD: 1/1

06607

AUTHOR: Bláha, Karel

CZECH/8-53-1-3/20

TITLE: On the Definition of the Term Alkaloid

PERIODICAL: Chemické listy, 1959, Vol 53, Nr 1, pp 10 - 13

ABSTRACT: A review of the historical definitions and the group division of criteria (chemical structure, country of origin and physiological activity).

There are 31 references, of which 3 are Czech, 9 German, 6 English, 2 Dutch, 1 Swiss, 1 Swedish, 3 Spanish, 1 French, 2 Soviet and 3 international.

ASSOCIATION: Laboratoř heterovyklických sloučenin, ČSAV, Praha
(Heterocyclic Compounds Laboratory, Czechoslovak Academy of Sciences, Prague)

Card 1/1

PITHA, J.; HORAK, M.; KOVAR, J.; BLAHA, K.

Configuration of nitrogens containing compounds. XI. The effect of configuration on the infrared spectra of some aminohydroxytetralins. Coll Cz Chem 25 no.11:2733-2745 N '60. (EEAI 10:6)

1. Laboratory of Heterocyclic compounds and Institute of Chemistry, Czechoslovak Academy of Science, Prague.

(Nitrogen) (Spectrum, Infrared) (Amino group)
(Hydroxy compounds) (Tetrahydronaphthalene)

Z/008/61/000/001/001/005
E112/E253

AUTHORS: Bláha, K. and Ferles, M.
TITLE: Academician Rudolf Lukeš. (Obituary)
PERIODICAL: Chemické listy, 1961, No. 1, pp. 1-15 + 2 plates
TEXT: Academician Rudolf Lukeš, D.Sc. who died on October 17, 1960 was Professor of Organic Chemistry at the University of Chemical Technology, Prague, President of the Czechoslovak Chemical Society at the Czechoslovak Academy of Sciences and Director of the Laboratory for Heterocyclic Compounds at the same institution. The present paper is an appraisal of his scientific and pedagogic achievements. Starting his career as a theoretical sugar chemist with E. Votoček, he concentrated later on the chemistry of heterocyclic compounds, this work being initiated by his discovery of the reaction of N-succinimide and N-methylglutarimide with the Grignard reagent. This method permits the lengthening of aliphatic acid chains by 4 or 5 carbons and makes readily available a number of new heterocycles, e.g. pyrrolones. It was shown by Lukeš that the two carbonyl groups in the cyclic imides display different functionality, and that only

Card 1/3

Z/008/61/000/001/001/005

E112/E253

Academician Rudolf Lukeš. (Obituary)

one of them was capable of reacting with the Grignard reagent. During the German occupation of the country and the closure of the Czech universities, Lukeš worked for the Society for Chemical and Metallurgical Production, Prague, where he was concerned with the chemistry of furane and discovered an electrolytic method for the reduction of keto-di-carboxylic acids (reduction of chelidonic- to pimelic acid). A new reaction was also discovered during the electrolytic reduction of dilevulinic acid: In addition to the expected sebacic acid, valeric acid also formed by fission of -C-C-chain between both carbonyl groups. In the field of furane chemistry, the 2,5-dicarboxylic acid was reacted with ethylene glycol to produce fibre forming monomers, similar to the poly-ethylene terephthalates. Work in the field of heterocycles, carried out at the above firm produced interesting results by the reduction of quaternary pyridinium compounds with formic acids, leading to piperidine and Δ^2 -piperidines. The latter products, which, so far, were not easily accessible, opened the way for an easy synthesis of a number of pyrrole derivatives. New methods

Card 2/3

Z/008/61/000/001/001/005
E112/E253

Academician Rudolf Lukeš. (Obituary)

were evolved to isolate and characterize the new bases and Lukeš found that β -alkyl-substituted derivatives could be isolated as quaternary salts with dinitro-chlorobenzene. The last period of Lukeš' activities were occupied with the study of alkaloids and particularly with problems of their stereochemical relationship and biological syntheses. Preparatory work consisted in establishing the relative configuration of some aminoalcohol, followed by determining the absolute configuration of a number of alkaloids (sedamine, hygrine, anabesine, etc.) The stereochemical course of many reactions, which could be taken as model substances for the understanding of biological alkaloid syntheses, was investigated. The work has not been completed. Lukeš and collaborators were the authors of text-books on Organic Chemistry (2 volumes) and Fundamentals of Preparative Organic Chemistry (1 volume). A list of original papers (189), patents (2), preliminary communications (35), lectures in print (7), books and manuscripts (12) and others (7) is appended.

Card 3/3

LUKES, R.[deceased]; DIENSTBIEROVA, V.; KOVAR, J.; BLAHA, K.

Configuration of nitrogen-containing compounds. XII. Configuration of
(-)-halostachine. Coll Cz chem 26 no.2:466-470 F '61.
(EEAI 10:9)

1. Laboratorium für heterocyclische Verbindungen, Tschechoslowakische
Akademie der Wissenschaften, Prag.

(Methylaminomethylbenzyl alcohol)
(Nitrogen)

PITHA, J.; JONAS, J.; KOVAR, J.; BLAHA, K.

Configuration of nitrogen-containing compounds. XIII. Preparation and tautomerism of aminooxazoline. Coll Cs Chem 26 no.3:834-846 Mr '61.
(EEAI 10:9)

1. Jetzige Adresse: Institut für organische Chemie und Biochemie, Tschechoslowakische Akademie der Wissenschaften, Prag (for Pitha).
2. Laboratorium für heterocyclische Verbindungen und Institut für organische Chemie und Biochemie, Tschechoslowakische Akademie der Wissenschaften (for Jonas, Kovar and Blaha)

(Aminooxazoline) (Nitrogen)

BLAGA, K. [Blaha, K.]; FERIES, M.

In memory of Academician R. Lukes. Zhur.ob.khim. 31 no.10:3487-
3489 0 '61. (MIRA 14:10)
(Lukes, Rudolf, 1897-1960)

LUKES, R. [deceased]; PITHA, J.; KOVAR, J.; BLAHA, K.

Configuration of nitrogen compounds. Part 14: On the kinetics of solvolysis of condensation products of vicinal aminohydroxytetralins with p-nitrobenzaldehydes. Coll Cz Chem 27 no.2:328-336 F '62.

1. Laboratorium fur heterocyclische Verbindungen, Tschechoslowakische Akademie der Wissenschaften, Prag. 2. Jetzige Adresse : Institut fur organische Chemie und Biochemie, Tschechoslowakische Akademie der Wissenschaften, Prag (for Pitha and Blaha).

BLAHA, K.

"General organic chemistry" by O. Wichterle. Reviewed by
K. Blaha. Coll Cz Chem 27 no.7:1745-1748 J1 '62.

БЛАНА, К.

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25-10

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12-203 (1-20-60) to 12-204 (1-20-60)
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1. Percentage of stock and shares in Government of India 7.4.60
- Company of the Government, India and the Indian Federation of India
- Available to all Government, India and the Indian Federation of India

2. Research in Education of the Deaf : 2015-2020, 9, 4, 221-237.

3. A report of observation on the grounds of the Commission in 1950, that the National Labor Relations Board had been "in a state of confusion" in 1947.

1. Warrant of Arrest - A writ issued by a judge or magistrate, commanding the arrest of a person accused of a crime.

and staff of the Faculty of Medicine (University of Medicine and Pharmacy), Faculty Building P-63-25.

3. Establishment of an Institute Centered in a Scientific Library. (Was

THE UNIVERSITY OF CHICAGO
LIBRARY
540 EAST 57TH STREET
CHICAGO, ILL. 60637
TEL. 773-936-5000
FAX 773-936-5000
WWW.CHICAGO.EDU

100

6. Walter D. Smith, Chairman of the Board, "Walter D. Smith Corp. 1971-72".

7. Recommendation for the Recommendation on Analytic Creativity: 1991

RECEIVED BY THE U.S. DEPARTMENT OF COMMERCE
BUREAU OF ECONOMIC RESEARCH
WASHINGTON, D.C. 20540

By request of the International Council of the Christian Society for the

1945

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APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000205420019-8"

BLAHA, K.

12. Book reviews; pp 587-588.
13. "Book Reviews: Part III. Titles and Special Publications." pp 589-593.
14. "Professor Rudolf J. BLAHA (affiliation not given); pp 594-595.
15. "Collection on Research in Alkaloids." K. BLAHA (affiliation not given); pp 596-597.
16. "Free Electrophoresis - Its Theory and Application to the Study of Macromolecular Substances." J. BLAHA, Institute of Biophysics and Blood Transfusion (Univ. of Medicine & Dentistry, Prague); pp 598-600.
17. "List of Candidate Dissertations." unspecified; p 601.
18. "Review of Foreign Journals and Books." unspecified; pp 602-604.
- 19th
CNO: 2000-5

CZECHOSLOVAKIA

LUKES, R; KOBLICOVA, Z; BLAHA, K.

Laboratory of Heterocyclic Compounds of the Czechoslovak
Academy of Sciences, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications,
Vol 8, 1963, pp 2182-2197

"On the Reaction of Angelicalactone with Amines."

CZECHOSLOVAKIA

KOVAR, Jp JARY J; Blaha, K.

Laboratory of Monosaccharides of the Technical Higher
School of Chemistry (for all)

Prague, Collection of Czechoslovak Chemical Communications,
Vol 8, 1963, pp 2199-2205

"On the Configuration of Nitrogenous Compounds XVI.
On the Oxydation of Aminoalkohols with Periodic Acids."

BLAHA, K.

~~_____~~
The 5th European Symposium on Peptide Chemistry in Oxford.
Chem listy 57 no.3:287-290 Mr '63.

SOBOTKOVA, H.; KOVAR, J.; BLAHA, K.

Data on the configuration of nitrogen containing compounds. Pt.
17: Coll Cz chem 29 no.8:1898-1903 Ag '64

1. Institut fur organische Chemie and Biochemie, Tschechoslo-
wakische Akademie der Wissenschaften, Prague (for Blaha). 2.
Spolana, Neratovice (for Sobotkova). 3. Laboratorium fur Mono-
sacharide, Technische Hochschule fur Chemie, Prague (for Kovar).

TROJANEK, J.; STROUF, O.; BLAHA, K.; DOLEJS, L.; HANUS, V.

On alkaloids. Pt. 12. Coll Cz chem 29 no.8:1904-1912 Ag '64.

1. Research Institute for Natural Drugs, Prague, Institute of Organic Chemistry and Biochemistry, and Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague.

BLAHA, Karel

Solution of a transportatj. problem using the frequency method.
Stroj nř zprac inf 10:241-259 '64.

1. Technical and Economic Research Institute of Chemical Industry,
Prague.

BLAHA, Karel; PELIKANOVÁ, Božena

Extract from the detailed flow chart for the solution of the transportation problem. Stroj na zprac inf 10:260-266 '64.

1. Technical and Economic Research Institute of Chemical Industry, Prague.

BLAHA, K.; HRBEK, J. (Jr); KOVAR, J.; PIJEWSKA, L.; SANTAVY, F.

Data on the configuration of nitrogen containing compounds. Pt. 18.
Coll Cz Chem 29 no.10:2328-2340 0 '64.

1. Laboratorium für heterocyclische Verbindungen, Tschechoslowakische
Akademie der Wissenschaften, Prague und Institut für Chemie, Medizinische
Fakultät, Palacky-Universität, Olomouc.

BLAHA, K.; HEROUT, V.

Report of the 3d International Symposium on the Chemistry
of Natural Substances held in Kyoto. Chem listy 58 no.11:
1363-1366 N '64.

BLAHA, K.; FRIC, I.

Amino acids. Pt.46. Coll Cz Chem 30 no.1:304-315 Ja '65.

1. Institute of Organic Chemistry and Biochemistry of the
Czechoslovak Academy of Sciences, Prague. Submitted July
2, 1964.

BLAHA, K.; RUDINGER, J.

Amino acids and peptides. Pts.47,48. Coll Cz Chem 30 no.2:
585-604 F '65.

1. Institute of Organic Chemistry and Biochemistry of the
Czechoslovak Academy of Sciences, Prague. Submitted July
23, 1964. 2. Chief Editor, "Collection of Czechoslovak Chemical
Communications" (for Blaha).

SANTAVY, F.; KAUL, J.L.; HRUBAN, L.; DOLEJS, L.; HANUS, V.; BLAHA, K.

Constitution of rhoeadine and isorhoeadine. Coll Cz chem 30
no.1:335-338 Ja '65.

1. Chemical Institute of the Medical Faculty of Palacky
University, Olomouc (for Santavy, Kaul and Hruban). 2. Institute
of Organic Chemistry and Biochemistry of the Czechoslovak
Academy of Sciences, Prague (for Dolejs and Blaha). 3. Institute
of Physical Chemistry of the Czechoslovak Academy of Sciences,
Prague (for Hanus). Submitted July 22, 1964.

CZECHOSLOVAKIA

BLAHNA, K; RUDINGER, J.

Institute of Organic Chemistry and Biochemistry of the
Czechoslovak Academy of Sciences, Prague (for both)

Prague, Collection of Czechoslovak Chemical Communications,
No 10, 1965, pp 3325-3331

"Amino Acids and Peptides. LVIII. Cyclization of Peptides
with 2-Ethyl-5-Phenylisoxazolium-3'-Sulphonate."

CZECHOSLOVAKIA

SANTAVY, F.; KAUL, J. L.; HRUBAN, L.; DOLEJS, L.; MANUS, V;
BLAHA, I.; CROSS, A.D.

1. Chemical Institute of the Medical Faculty of Palacky University, Olomouc (for Santavy, Kaul, Hruban); 2. Institute of Organic Chemistry and Biochemistry, Prague (for Dolejs, Blaha); 3. Institute of Physical Chemistry of the Czechoslovak Academy of Sciences, Prague (for Manus); 4. Syntex Research Center, Palo Alto, California, U.S.A. (for Cross)

Prague, Collection of Czechoslovak Chemical Communications,
No 10, 1965, pp 3479-3499

"Constitution of Rhoeadine and Isorhoeadine."

CZECHOSLOVAKIA

ELAHA, K; FRIG, I; JAKUBKE, D.H

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague - (for Elaha and Frig); 2. Institute of Organic Chemistry, Martin Luther University, Halle (Saale), German Democratic Republic - (for Jakubke)

Prague, Collection of Czechoslovak Chemical Communications, No 2, February 1967, pp 558-569

"Amino acids and peptides. Part 67: Optical rotatory dispersion of α -amino acid selenoaryl esters and some isologous phenyl esters."

BLAHA, Karel, Dr.

Styloid process as a cause of neuralgia of the glossopharyngeal nerve. Cas.lek.cesk. 91 no.7:216-218 15 Feb 52.

1. Z otolaryngologické kliniky university Karlovy. Prednosta:
prof. dr. Ant. Precechtel.

(TEMPORAL BONE,

styloid process causing neuralgia of glossopharyngeal
nerve, surg.)

(NERVES, GLOSSOPHARYNGEAL, diseases,
neuralgia caused by styloid process, surg.)

BLAHA K.

BLAHA K. Otolaryng. Klin., Karlov Univ. Praha. *Diagnosticke problemy otolaryngologicke pri kilistove meningoencephalitide. Otolaryngological diagnostic problems in tick-borne meningoencephalitis CSL.OTCLAR. (Praha) 1953, 2/2 (116-122)

Description of a case of purulent sinusitis of the left antrum of Highmore and the frontal sinus. Cerebral and meningeal symptoms which did not disappear simultaneously with the successful treatment of the purulent focal infection with penicillin suggested a viral superinfection. This was proved by the neutralizing test in the CSF for the virus of the Western type of epidemic seasonal tick-borne encephalitis occurring in wooded parts of Czechoslovakia since World War II. The epidemiological nature was explored and demonstrated. The action of this virus is stimulated by bacterial infections elsewhere in the body; otherwise it may be latent. The patient recovered.

Bloch - Amsterdam (XX,11,8)

SO: EXCERPTA MEDICA, Section 8, Vol. 7, No. 5 May 1954

BLAHA, K.

Otolaryngologic diagnostic problems in tick meningoencephalitis.
Cesk. otolar. 2 no.2:116-122 June 1953. (CJML 25:4)

1. Of the Ear, Nose and Throat Clinic (Head--Prof. A. Precechtel,
M.D.) of Charles University, Prague.

EXCERPTA MEDICA Sec 11 Vol 9/7 O.R.I.

July 56

1219. BLÁHA K. and UNGAR E. Otolaryng. Klin. SFN; Onkolog. Úst. FN, Praha.
 Klinický průběh a výsledky léčby Ca laryngu metodou řízeného dávkování.
 The clinical course and therapeutic results of the
 treatment of laryngeal carcinoma by the method of re-
 gulated dosage CAS. LÉK. ČES. 1955, 94/47-48 (1283-1289)
 On the basis of the courses and results of the authors' treatment the following conclu-
 sions may be made: (1) Irradiation carried out by the method of regulated dosage en-
 abled the authors to cure small defined tumours of the vocal cords as well as ex-
 tensive pharyngo-laryngeal tumours, and even those where cartilage was being
 destroyed. (2) It was confirmed that the success of irradiation treatment was not
 dependent so much on the extent of the neoplastic proliferation, or on the duration
 of the disease, on other factors of which infection of the tumour ranks first.
 (3) The sinus morgagni, fossa piriformis and tumours of the anterior commissure
 with spread into the base of the epiglottis proved to be unfavourable sites to
 tumours that particularly resisted irradiation treatment. (4) As a post-irradiation
 complication perichondritis of variable aetiology was observed. Its course was
 protracted but could be cured without surgical measures with antibiotics aided by
 vagosympathetic cervical blockade. (5) In cases resistant to treatment by irradiation
 which were later operated on, especially in the ones where the laryngeal
 cartilages were involved, the post-operative healing was uneventful. (6) The
 treatment of laryngeal carcinoma is becoming complex and an integral part of the
 work of the radiologist and laryngologist.
 Authors' summary (XI, 5, 16)

EXCERPTA MEDICA Sec 17 Vol 5/7 Public Health July 59

2068. THE HAZARD OF NOISE IN MINES - Riziko hluku v hornictvi - Blaha V.
Krajská hyg. Epid. Stanice, Oddor Hyg. Práce, Ostrava - PRACOV. LEP. 1958,
10/3 (203-209) Graphs 14

Noise caused by instruments and machines in the mining industry usually surpasses the limit considered by regulations as acceptable and safe. The greatest noise from machines and instruments in mines is caused by air engines running blank. When working, these engines are less noisy and the work changes their sound-spectrum. Power-driven machines are acoustically more suitable for mines than are air-driven ones. The harder the rock, the less favourable the noise from mining instruments. In coal mines, coal absorbs the noise. In the fight against noise, at the noisiest sources simple absorbers can be used with excellent results (turbines). The spectrum of the noise of mining machines is in some instances very simple (almost pure sounds); in some instances it is a 'combined' spectrum. In practice, we must almost always assume complex sound spectra with a complicated effect on the sense of hearing.

BLAHA, Karel; HOUSTKOVA, Eva

Diseases of the upper respiratory tract in iron workers. Cesk. otolar 8
no.2:68-77 Apr 59.

1. ORL katedra, vedouci akademik A. Precechtel ORL oddeleni Fakultni
polikliniky v Praze, prednosta doc. dr. K. Blaha.

(OCCUPATIONAL DISEASES,

resp. tract dis. in iron workers (Cs))

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CZECHOSLOVAKIA UDC 616.28-008-1:616.21-007-009.8-036.21

KREMENOVA, J.; BLAHA, K.; HLAVAC, J.; REISEMAUER, R.; Research Institute of Endocrinology (Vyzkumny Ustav Endokrinologicky), Prague, Chief (Prednosta) Docent Dr K. SILINK; Otolaryngological Department, Polyclinic of the Faculty Hospital (Otolaryngologické Oddelení Polikliniky Fakultní Nemocnice), Prague, Head (Vedoucí), Docent Dr K, ZEMAN

"Contribution to the Investigation of Endemic Degeneration. IV."

Prague, Časopis Lékařů Českých, Vol 106, No 7, 17 Feb 67, pp 187 - 193

Abstract /Authors' English summary modified_7: Investigation of the incidence of impaired hearing and morphological anomalies of the ENT system in endemic degeneration showed the following: In the group of the Policka area more disorders of the ENT system were found than in the Sedlcany area. Outstanding was the incidence of deafmutism accompanying cretinism, and the incidence of cleft palate and lip. Morphological anomalies of the face were more frequent in the Sedlcany area. Gothic palates in impaired development of facial bones were frequent. In manifest cretinism perceptive hearing disorders were frequent in both groups. 4 Figures, 11
1/1 Tables, 12 Western, 7 Czech references. (Ms. rec.)

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Polycyclic impregnation of sleepers. Zel dop tech 12 no.1:8-9 '64.

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D244/D301

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AUTHORS: Bláha, Karel and Machek, Josef

TITLE: Linear programming

PERIODICAL: Pokroky matematiky, fyziky a astronomie, no. 1, 1960,
28-41

TEXT: This is the first of two articles to inform readers on linear programming and methods for solving economic problems. The first article briefly describes the simplex method of linear programming and its application for solving the transportation problem, while the second article deals with applying linear programming to three concrete problems which were practically solved at the VÚTE CHP - Výzkumný ústav technicko-ekonomický chemického průmyslu (Technical-Economic Research Institute of the Chemical Industry). Czechoslovak industrial research centers are lately also paying increased attention to linear programming, the business application of which (transportation) has resulted already in great savings. In the introduction, the authors define linear programming

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as the solution of the problem to maximize or minimize a linear function of n variables under secondary conditions, expressed by a system of m linear equations ($m < n$), and the requirement that the solution be non-negative; i.e. to select that solution (or those solutions if more are possible) of the infinitely many solutions of a system of m linear equations in n unknowns which has all components non-negative, $x_i \geq 0$, $i = 1, 2, \dots, n$, and where the linear function of n variables,

$f(x_1, \dots, x_n) = \sum_{i=1}^n x_i c_i$, reaches a maximum or minimum in the multitude

of all non-negative solutions. The theoretical explanation of the simplex method of linear programming, given in this article, is based on a paper by A. Charnes, W. Cooper and A. Henderson (Ref. 1: An Introduction to Linear Programming, New York 1953). This is followed by an explanation of applying the simplex method for solving the transportation problem: Variables are identified by two indices $i = 1, \dots, m$; and $j = 1, \dots, n$. The transportation problem is to minimize the function $f(x) = f(x_{11}, \dots, x_{mn})$

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$= \sum_{i=1}^m \sum_{j=1}^n c_{ij} x_{ij}$ in the multitude of non-negative solutions $\sum_{i=1}^m x_{ij} = p_j$,
 $j = 1, 2, \dots, n$; $\sum_{j=1}^n x_{ij} = q_i$, $i = 1, 2, \dots, m$, where p_i and q_j are given
 numbers satisfying the condition $\sum_{j=1}^n p_j = \sum_{i=1}^m q_i$. The practical sense of
 the transportation problem is that numbers q_i , $i = 1, 2, \dots, m$ represent
 the capacity m of sources of a certain product, numbers p_j , $j = 1, 2, \dots,$
 n represent the consumption of this product at n places, x_{ij} is the ex-
 tent to which the i -th source contributes to cover the demand at the
 j -th place of consumption (which therefore has to be shipped from i to j),
 and numbers c_{ij} represent the costs for shipping the product units from
 the source i to the place of consumption j . In this case, the transpor-
 tation problem is to minimize the total shipping costs. The development

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of the transportation problem, given in this article, is based on the English-language material by J. Machek (Ref. 4: A Note on the Solution of the Transportation Problem by the Simplex Method, Časopis pro pěstování matematiky (Journal for the Development of Mathematics). This article will be continued. There are 1 table and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The reference to English-language publications reads as follows: A. Charnes, W. Cooper, A. Henderson: An Introduction to Linear Programming, New York, 1953; A. Charnes: Optimality and Degeneracy in Linear Programming, Econometrica 20(1952); J. Machek: A Note on the Solution of the Transportation Problem by the Simplex Method, Časopis pro pěstování matematiky.

ASSOCIATION: Výzk. ústav techn. ekonomický chemického průmyslu, Praha (Technical-Economical Research Institute of the Chemical Industry, Prague) (Bláha); Matekaticko-fyzikální fakulta KU (Mathematical-Physical Department of the Charles University) (Machek)

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AUTHORS:

Bláha, Karel and Machek, Josef

TITLE:

Linear programming - IIInd Part - Examples for solving some problems

PERIODICAL:

Pokroky matematiky, fyziky a astronomie, no. 2, 1960, 129-147

TEXT: This is the second of two articles to inform readers on linear programming and methods of solving certain transportation problems. The theory of the simplex method of linear programming and its application to transportation were discussed in the first article; this part deals with three practical problems solved at the VÚTE CHP - Výzkumný ústav technicko-ekonomický chemického průmyslu (Technical-Economical Research Institute of the Chemical Industry). The first is to find an optimum technology, namely the optimum adjustment of a plastic-fiber spinning machine, based on previously achieved test results of a certain technological sector characterized by the variables x_1 , x_2 and x_3 . The quality of the plastic fiber is

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defined by the strength y and the elasticity u which, in turn, depend on the technological parameters x_1 , x_2 , and x_3 . The problem posed is to find such parameter values, at which the strength y is maximum and the elasticity u ranges between given limits $9 \leq u \leq 13$, while production conditions require parameters limited to $1 \leq x_1 \leq 3$, $2 \leq x_2 \leq 5$, and $0 \leq x_3 \leq 4$. The dependence of strength and elasticity on the parameters, as determined by previous tests, is: $y = 3.70 + 0.106x_1 - 0.083x_2 - 0.0121x_3$, $u = 7.958 - 0.258x_1 + 0.55x_2 + 0.291x_3$, and the resulting problem is to maximize the linear function $y(x_1, x_2, x_3) = 3.70 + 0.106x_1 - 0.083x_2 - 0.0121x_3$ under the secondary conditions of u , x_1 , x_2 , and x_3 listed above. After adjustment and introduction of auxiliary variables (up to x_{13}) for secondary conditions, the problem is to maximize the function

$$f(x_1, x_2, \dots, x_{13}) = \sum_{i=1}^{13} c_i x_i, \text{ where } c_1 = 0.106, c_2 = -0.083, c_3 =$$

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- 0.0121, $c_4 = c_5 = \dots = c_{10} = 0$, $c_{11} = c_{12} = c_{13} = -M$. The final solution of the problem reads: $x_4 = 4.260$, $x_7 = 2.401$, $x_1 = 3$, $x_2 = 2$, $x_8 = 1.85$, $x_9 = 2$, $x_3 = 2.15$, which means that the fiber strength y is 3.806 and the elasticity u is 8.91 when parameters are adjusted to $x_1 = 3$, $x_2 = 2$, and $x_3 = 2.15$. The second problem, quoted as an example, is to minimize losses originating when large reels of continuous paper are cut to reel sizes as ordered by customers. Supposedly it is required to produce k_1 reels of the width r_1 , k_2 reels of the width r_2, \dots , and k_m reels of the width r_m , coefficients of re-reeling c_{ij} are determined according to $c_{ij}r_1 + c_{2j}r_2 + \dots + c_{mj}r_m + p_j = R$, ($j = 1, 2, \dots, m$), where R is the width of the original large reel, p_j is the loss, and m is the number of various systems which can be adjusted on the reel cutter. By introducing x_j as the number of connections of the j -th system into the solution (x_j

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can be 0 or a positive whole number), and by elimination of constants, the problem posed is the minimize the function $f(x) = \sum_{j=1}^n x_j$. The problem to find the minimum loss is therefore identical with that of finding the smallest amount of original reels to be cut; however, it is preferred to minimize the function f , since p_j values can be eliminated from the calculation when the simplex method is applied. The original table which contained 75 systems for the possible solution of the problem could be reduced to 14 by eliminating those columns whose coefficients can be expressed by a linear combination of coefficients of other columns. The third example given is the solution of the transportation problem for a fertilizer distributor supplying the products of three different producers to eight different consumers. Supposing that the entire production is consumed, the basic solution of the problem is obtained by the index method, which is based on the consideration that lowest freight rates be taken advantage of as much as possible. The algorithm for solving the transportation problem is found by aligning the initial basis solution into a table with exactly

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$m + n - 1 = 10$ fields filled in, and by making changes in the table until all free fields have corresponding non-negative differences. In conclusion, the authors state that these articles do not contain complete information. Especially important is the preparation of linear programming methods for automatic computers. A simplex-method program for the first Czechoslovak computer was prepared by O. Pekorná (Ref. 7: Instruční sít' pro simplexovou metodu (Program for the Simplex Method) Zpráva Výzkumného ústavu matematických strojů, 1958). The Adop analog computer developed by the Výzkumný ústav matematických strojů (Computer Research Institute) allows transportation problems to be solved according to a method suggested by Docent F. Nežička (Ref. 3: O jednom minimálním problému v teorii lineárního programování (On One Minimum Problem in the Theory of Linear Programming) Skripta, Matematický ústav ČSAV, Prague). There are 11 tables and 7 references: 4 Soviet-bloc and 3 non-Soviet bloc. The reference to the English-language publications reads as follows: H. M. Markowitz, A. S. Manne: On the Solution of Discrete Programming Problems; Econometrica 25, 1957; Dorfman, Samuelson, Solow: Linear Programming and Economic Analysis, New York 1958; Churchmann, Ackoff, Arnoff: Introduction to Operations Research, New York 1957.

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